LMSC B030138
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JOINT MESSAGEFORM

SECURITY CLASSIFICATION [redacted]

1-1

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LXVI

PRECEDENCE	TYPE MSG (Check)			ACCOUNTING SYMBOL	ORIG. OR REFERS TO	CLASSIFICATION OF REFERENCE
	BOOK	MULTI	SINGLE			
ACTION						
INFO						

FROM:
6595TH AEROSPACE TEST WING, VANDENBERG AFB, CALIF.

TO:
SPACE SYSTEMS DIV., LOSA, CALIF.

SPECIAL INSTRUCTIONS

SUBJECT: EIGHT-HOUR FLASH REPORT

1. SUMMARY VWZD-26-6-289

A VEHICLE CONSISTING OF SLV-2A BOOSTER NO. 381 AND S-01A ORBITAL STAGE NO. 1166 WAS LAUNCHED ON THE FIRST ATTEMPT FROM VAFB COMPLEX 75-1, PAD 2, AT 1737:26.16 PDT ON 26 JUNE 1963. THE PRIMARY LAUNCH OBJECTIVE, TO PLACE THE S-01A SATELLITE WITH PAYLOAD IN A NEAR-POLAR ORBIT, WAS ACCOMPLISHED. THE VTS RADAR PLOTBOARD INDICATED THE FOLLOWING APPROXIMATELY INJECTION CONDITIONS: ALTITUDE 136 STATUTE MILES; PAD REFERENCED VELOCITY 25550 FPS; ELEVATION FLIGHT PATH ANGLE, APPROXIMATELY 0 DEG; AZIMUTH FLIGHT PATH ANGLE, APPROXIMATELY 172 DEG.

GROUND GUIDANCE TRAJECTORY EVALUATION AND REPORTED FIRST PASS ORBITAL PARAMETERS INDICATE THAT

DATE	TIME
26	
MONTH	YEAR
JUN	63

WRITER

SYMBOL

TYPED NAME AND TITLE (Signature, if required)
Maj F. L. Wright, USAF

PHONE 866-3771 | PAGE NR. 1 | NR. OF PAGES

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RELEASER

SIGNATURE [redacted]

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FROM:

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THE S-01A VEHICLE WAS APPROXIMATELY 3 NAUTICAL MILES HIGH AT INJECTION AND THAT THE ORBITAL PERIOD IS APPROXIMATELY 0.1 MINUTE ABOVE NOMINAL.

II. SIGNIFICANT EVENTS

PRELIMINARY VALUES OF SIGNIFICANT LAUNCH EVENTS ARE:

LIFTOFF (1737:24.16 PDT)	ZERO
WEB BURNOUT ON SOLID MOTORS	
NO. 1	28.1
No. 2	27.6
No. 3	26.7
SOLID MOTOR THRUST TERMINATION	
No. 1	41
NO. 2	40
NO. 3	38.7
SOLID MOTOR SEPARATION SIGNAL	70.6
SOLID MOTOR JETTISON	70.66
STEERING INITIATED	92.5
STOP STEERING	143.4
MECO (PROPELLANT DEPLETION)	146.27
S-1 COMMAND	146.8
VECO	155.26
SEPARATION COMMANDS (S-2)	159.58
SEPARATION COMPLETE	162.09
ULLAGE ROCKET IGNITION	164.17
S-01A [redacted]	167.17

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S-01A THRUST ATTAINMENT (90 PERCENT Pc)	168.4 SEC
BEGIN S-01A STEERING	177.96 SEC
END S-01A STEERING	363.46 SEC
ENABLE S-01A VELOCITY METER	364.97 SEC
S-01A ENGINE SHUTDOWN (VELOCITY METER)	410.93 SEC
VTS VERLORT RADAR FADE	417 SEC
VTS ACQUISITION BEACON FADE	449 SEC
VTS TELEMETRY DATA FADE (LINK 1)	457 SEC
VTS TELEMETRY SIGNAL STRENGTH FADE (LINK 2)	471 SEC

III. SLV-2A PERFORMANCE

ALL SLV-2A SUB-SYSTEMS PERFORMED ADEQUATELY FOR ACHIEVEMENT OF THE PRIMARY TEST OBJECTIVES. THE LIFTOFF ATTITUDE TRANSIENTS WERE SLIGHT. MECO OCCURRED DUE TO PROPELLANT DEPLETION RATHER THAN GROUND GUIDANCE COMMAND.

IV. COMMAND GUIDANCE

PERFORMANCE OF THE COMMAND GUIDANCE SYSTEM APPEARS SATISFACTORY HOWEVER MECO OCCURRED, APPROXIMATELY 0.5 SEC BEFORE GROUND GUIDANCE COMMAND. QUICK LOOK EVALUATION OF INJECTION CONDITIONS AND ORBITAL PARAMETERS AT GUIDANCE TERMINATION PREDICTED AN

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INJECTION ALTITUDE OF 112.77 NM (NOMINAL: 109.93 NM), INJECTION FLIGHT PATH ANGLE OF PLUS 0.14 DEG (NOMINAL: ZERO DEG), ORBITAL PERIOD OF 90.72 MIN (NOMINAL: 90.61 MIN), AND INCLINATION ANGLE OF 81.81 DEG (NOMINAL: 81.79 DEG).

ORBITAL PARAMETERS REPORTED AFTER REV. 1 ARE: KX PERIGEE ALTITUDE OF 113.30 NM (NOMINAL: 109.64 NM), APOGEE ALTITUDE OF 224.64 NM (NOMINAL: 221.71 NM), ECCENTRICITY OF 0.01547 (NOMINAL: 0.01557), PERIOD OF 90.69 MIN (NOMINAL: 90.61 MIN), AND INCLINATION ANGLE OF APPROXIMATELY 81.8 DEG (NOMINAL: 81.79 DEG).

V. S-01A PERFORMANCE

ALL S-01A VEHICLE SUBSYSTEMS PERFORMED SATISFACTORILY DURING LAUNCH TO PROVIDE ADEQUATE TRAJECTORY CONDITIONS FOR ORBITAL INJECTION AT ENGINE SHUTDOWN.

CONTROL GAS CONSUMPTION OF APPROXIMATELY 13 LBS DURING THE THRUST INTERVAL WAS EXCESSIVE. A ROLL GYRO OFFSET OF APPROXIMATELY 3 DEG WAS REQUIRED TO PRODUCE A CONTROL MOMENT TO COUNTERACT AN EXTRANEOUS TORQUE. AT THE TIME OF TELEMETRY SIGNAL FADE AT VTS, THE ORBITAL TIMER WAS SET AT 5437 SEC (STEP 26.5) IN THE RESET-ON POSITION, IN THE DECREASE MODE, AND ALTERNATE RE-ENTRY DISARM STATE.

VI. SPACE-GROUND COMMUNICATIONS

SATISFACTORY TRACKING PERFORMANCE WAS MAINTAINED BY THE TLM-18 AND TRI-HELIX ANTENNA SYSTEMS.

CONFIDENTIAL

TELEMETRY DATA FROM ALL LINKS WERE SATISFACTORILY RECEIVED AND RECORDED.

VERLORT RADAR EXPERIENCED DIFFICULTY IN MAINTAINING CONTINUOUS VEHICLE TRACK DUE TO RECEIVED SIGNAL DROPOUTS. LOSS OF TRACK OCCURRED 4 TIMES FOR PERIODS RANGING FROM 2 TO 12 SEC.

VII. COUNTDOWN

THIS WAS THE FIRST TAT CONFIGURATION VEHICLE LAUNCHED FROM PAD 2, LAUNCH COMPLEX 75-1. THE COUNTDOWN WAS INITIATED AT 0655 PDT ON 26 JUNE 1963 AND PROCEEDED TO LIFTOFF WITH TWO HOLDS TOTALING 37 MIN BEING IMPOSED.

HOLD NO. 1 WAS IMPOSED IN TASK 16, VEHICLE STAGE PRESSURIZATION FROM 1645 TO 1720 TO COMPLETE WORK ON THE COUNTDOWN WHICH HAD FALLEN BEHIND SCHEDULE, PRIMARILY BECAUSE OF INSPECTION REQUIRED AFTER AN INADVERTENT DELUGE OF THE PAD.

HOLD NO. 2 WAS IMPOSED IN PHASE V AT T-2 MIN FROM 1732 TO 1734 WHEN THE SLV-2A MAIN FUEL TANK VENT VALVE FAILED TO CLOSE. AFTER REPEATED RECYCLING OF THE VALVE DURING THE HOLD, IT RETURNED TO NORMAL OPERATION.

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IN ADDITION THE FOLLOWING PROBLEMS AND DELAYS WERE ENCOUNTERED:

1. CLOSEOUT OF TASK 2 (VEHICLE PREPARATION) WAS DELAYED 34 MIN TO PERFORM ADDITIONAL VERIFICATION CHECKS OF NEW LMSC PAD EQUIPMENT BEING USED ON THE FIRST LAUNCH AND ON UMBILICAL INSTALLATIONS. ALSO, AN LMSC PERSONNEL HI-LIFT MALFUNCTIONED AND WAS REPLACED.

2. IN TASK 4, THE ORBITAL PERIOD INDICATION READ FROM THE H-TIMER FREQUENCY WAS IN DISAGREEMENT WITH THE PROGRAMMED STEP POSITION. IT WAS DETERMINED THAT THE TIMER FREQUENCY WAS NORMAL AND THAT THERE WAS AN ERROR IN INTERPRETATION OF THE STEP POSITION. THE TWO LINK II CHANNEL F MEASUREMENTS GAVE ABNORMAL INDICATIONS. THE MEASUREMENTS WERE WAIVED BY THE AIR FORCE.

3. A 66 MIN DELAY WAS ENCOUNTERED IN TASK 6 (BTL CHECKS) WHEN THE BTL INTERNAL POWER MONITOR ON THE DAC LAUNCH MONITOR CONSOLE FAILED TO INDICATE WHEN THE LMSC SYSTEM WAS SWITCHED TO INTERNAL POWER. THE PROBLEM WAS DETERMINED TO BE DUE TO A DISCONNECTED WIRE IN THE LMSC PAD ELECTRICAL TRAILER.

4. DURING THE ENTIRE COUNTDOWN THE BLOCKHOUSE HARDLINE INDICATION OF S-01 YAW GYRO OUTPUT WAS NON-FUNCTIONAL.

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FROM:

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DUE TO A DEFECTIVE UMBILICAL PIN. PROPER OUTPUT OF THE YAW GYRO WAS VERIFIED ON TELEMETRY. NO REPAIRS WERE MADE.

5. IN TASK 12 THE PAD WATER SYSTEM PANIC SWITCH WAS INADVERTENTLY ACTUATED WHILE A LIGHT IN A BLOCKHOUSE CONSOLE WAS BEING REPLACED. THE PAD, LAUNCHER, AND LOWER PORTION OF THE VEHICLE WERE FLOODED BEFORE THE PANIC RESET SWITCH COULD BE ACTUATED TO STOP THE DELUGE. DAC PERSONNEL MADE A THOROUGH INSPECTION TO DETERMINE EFFECTS OF WATER BEFORE PROCEEDING WITH THE TASK. THIS INCLUDED REMOVAL OF EACH OF THE 3 SOLID MOTOR INTERFACE SEROUDS FOR INSPECTION. THE PROBLEM CAUSED A DELAY OF ABOUT 140 MIN.

VII. AEROSPACE GROUND EQUIPMENT PERFORMED SATISFACTORILY TO SUPPORT CHECKOUT AND LAUNCH OF THE VEHICLE WITH THE FOLLOWING EXCEPTIONS:

A. A DISCONNECTED GROUND PATCH IN THE LMSC PAD ELECTRICAL TRAILER RESULTED IN FAILURE OF DAC TO RECEIVE AN INDICATION ON THE BTL INTERNAL POWER MONITOR WHEN LMSC SWITCHED TO INTERNAL POWER. NO REPAIRS WERE MADE DURING THE COUNTDOWN.

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B. THE BLOCKHOUSE HARDLINE INDICATION OF S-01A YAW GYRO OUTPUT WAS NON FUNCTIONAL DURING THE COUNTDOWN.

C. IN TASK 12, IT WAS NECESSARY TO REPLACE A BULB IN THE PAD WATER SYSTEM PANIC LIGHT RECEPTACLE ON THE CONSOLE. DURING INSTALLATION THE OPERATOR INADVERTENTLY ACTUATED THE PAD WATER SYSTEM.

IX. PAD DAMAGE WAS GENERALLY NO GREATER THAN NORMAL AND NORMAL RECOVERY TIME IS ANTICIPATED. THE LMSC QUENCHER FILL UMBILICAL WAS DAMAGED AT LIFTOFF ALLOWING AN EXCESSIVE AMOUNT OF ACID TO ESCAPE UNTIL A PAD HAND VALVE WAS CLOSED. A SMALL AFTER-FIRE OCCURRED AT THE BASE OF THE LAUNCHER.

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